

In Re:
BALLARD MINE CLEANUP

PUBLIC HEARING
April 11, 2018

T&T Reporting, LLC
477 Shoup Avenue, Suite 105
Idaho Falls, Idaho 83402

PUBLIC HEARING

BALLARD MINE CLEANUP

Wednesday, April 11, 2018

6:30 P.M.

Soda Springs City Council Room

Soda Springs, Idaho

BE IT REMEMBERED that the hearing was taken
at the Soda Springs City Council Room, located at 9
West 2nd South, Soda Springs, Idaho, before Lanice M.
Lewis, Court Reporter and Notary Public, in and for
the State of Idaho, in the above-entitled matter.

1 (The hearing proceeded at 6:30 as follows:)

2 P R O C E E D I N G

3 QUESTIONS AND ANSWERS

4 Q. Dave, was any of the groundwater or
5 surface water reaching or has reached the Blackfoot
6 River and if it has, is that a concern?

7 A. We put a whole series of monitoring
8 wells -- I wish, I could -- okay. So it's a big
9 site, and it's about a mile, this site is about a
10 mile from the Blackfoot River, and we've drilled a
11 whole bunch of monitoring wells on basically every
12 side of the site, including a whole bunch of wells
13 between the southwest portion of the site and the
14 Blackfoot River.

15 And it appears that there's a plume of
16 contaminated groundwater, shallow contaminated
17 groundwater, that's approaching the Blackfoot River.
18 But the concentrations in that plume decrease pretty
19 rapidly before it actually gets to the Blackfoot
20 River.

21 So, you know, I don't -- it doesn't
22 appear -- there doesn't appear to be an impact to the
23 Blackfoot from that plume, but it's something that we
24 still need to address as part of the final remedy.

25 Q. Thank you.

1 Q. David, surface water samples within the
2 Blackfoot both upstream and downstream of where that
3 plume would be intersecting have shown there is no
4 impact to the Blackfoot or has been none. There's no
5 elevated levels found in the Blackfoot.

6 A. No, that's right.

7 Q. Dave, part of the -- it's obvious that
8 part of the solution here is the effectiveness of the
9 reactive barrier in some of the engineered wetlands
10 specifically in removing selenium. Do we have a lot
11 of examples of where that has worked --

12 A. Well, I would say a couple of things: I
13 guess, No. 1, I think the most important part of the
14 remedy is the cover system. It's not the PRB's or
15 the wetland treatment cells. We think long term the
16 cover system is the main element of the remedy that's
17 going to control releases to groundwater and surface
18 water.

19 And the PRB's and the wetland treatment
20 cells might only be a temporary thing for a number of
21 years while the cover matures and becomes more fully
22 effective.

23 But to answer your question about -- you
24 know, these are -- these are demonstrated
25 technologies that are used at mining sites in various

1 places in the west. And, for example, PRB's Monsanto
2 has significant experience with PRB's at the South
3 Rasmussen site. And you've probably seen that data,
4 but that data shows that that technology works really
5 well in these kinds of conditions.

6 The wetland treatment cells, we haven't
7 done like a full-scale pilot of that system at the
8 Ballard Mine, but there are other sites in the west
9 where they found that those sorts of treatment
10 technologies work really well.

11 Q. If I could follow-up, so I have seen
12 wetland treatments up in the Silver Valley dealing
13 with mine pivots. Are these similar to those?

14 A. I'm not familiar with them. I haven't
15 looked at the data from those sites. But we'll be
16 going through some design work and coming up with
17 designs that are pretty specific that we think will
18 work for the contaminants that we have and the flow
19 rates that we have. All those things need to be
20 figured out and sorted out during the design phase.

21 Q. Tell me about this selenium that's
22 already went out across the ground. What's -- it's
23 there forever?

24 A. Well, in the surface water and sediment,
25 yes. So there have been releases of -- I mean, you

1 know, water's been flowing off that site since they
2 closed Donman and moved on to Henry in 1969.

3 And so there's been 50 years of releases
4 from this site to the environment. Water kind of
5 flowing off the mine dumps and into those
6 intermittent streams that are on the margins of the
7 site. Those that run off carries contaminated
8 particles into those water sheds.

9 There have been releases to shallow
10 groundwater for 50 years from that site, and those
11 are shown in those contaminated plumes that move off
12 to the east and to the southwest. And the
13 constructed components of the remedy are going to
14 control future releases from the site, but there is
15 still a mass of selenium in the groundwater that's
16 already moved off the site. There's still a mass of
17 selenium in like sediment that's been deposited in
18 those intermittent drainages downstream of the site.

19 And we think by controlling the source
20 and preventing new releases from occurring that over
21 time there will be dilution and dispersion and, you
22 know, basically mixing of, you know -- the sediment
23 is going to -- the contaminated sediment in those
24 intermittent streams is going to wash out over time
25 and disperse over time to a level that we think will

1 meet RI space cleanup levels.

2 Q. But it's time. I've been told it's like
3 a John Deere tractor sitting in a pasture.

4 A. Well, you know, we don't have a -- we
5 don't have, like, a hard and fast number. But I'm
6 thinking, based on my experience a number of decades,
7 it's not going to happen overnight. It's not going
8 to happen in a few years. It's going to happen over
9 a period of decades.

10 And the same with -- you know, the same
11 with groundwater. There's a mass of selenium in that
12 shallow groundwater to the east of the site and to
13 the southwest of the site that's going to -- that's
14 already there. It's not going to be corrected by the
15 PRB's. It's already beyond where we've thought about
16 putting PRB's.

17 But water that enters the aquifer from
18 the surface or clean water that enters it is going to
19 dilute and disperse that selenium. We think it will
20 reach cleanup levels or MCL's within a -- we're just
21 not sure. It might be -- it might be years to
22 decades.

23 And so I mean it's likely that we'll put
24 land use controls on those downstream areas. For
25 example, restrictions on drilling wells for people

1 to, you know, pump water out of those contaminated
2 aquifers until we reach our cleanup levels.

3 Q. Do you know how deep it's gone through
4 your testing? Does it get in the deep groundwater?
5 Is it just all surface or more?

6 A. I'm going to maybe ask Tim to help
7 answer that question. But I just don't remember -- I
8 mean, the alluvial aquifer I believe is contaminated
9 as deep as we -- I mean, the alluvial aquifer isn't
10 that deep to start with. And we've sampled it at
11 different levels, and it's contaminated.

12 But my understanding is that the aquifer
13 below the shallow aquifer, the Dinwoody is not
14 impacted above MCL's. We have some wells into the
15 Wells Formation near the West Ballard Pit. I think
16 we've got three or four wells into that deeper
17 aquifer. And that shows impacts that appear to be
18 isolated to that corner of the site. And I think --
19 we think that this cleanup approach is going to shut
20 off the delivery of new contaminants to that deeper
21 aquifer.

22 And the stuff that's already in there
23 will dilute and disperse over time and will reach
24 MCL's in the deeper Wells Formation.

25 Q. Okay.

1 A. Does that answer your question?

2 Q. It does. Thank you.

3 A. Anything you wanted to add, Tim?

4 A. No, I think you hit it. You know, the
5 alluvial aquifer, the contamination is pretty much
6 gravel in the alluvial aquifer. And it's sand and
7 gravel. You know, it's covered with both materials
8 so we can't even say it's a preferential pathway.

9 Q. What is Woody? What do you call it,
10 Woody Din?

11 A. It's the deeper, the bedrock rock that's
12 formed underneath the alluvial. You know you can't
13 monitor it. And I don't think it says -- to the
14 aquifer. I think it's more permeable. And so the
15 preferential pathway again it's going to give you the
16 shallow alluvial aquifer --

17 Q. And Tim --

18 A. -- and we can't monitor it.

19 Q. -- the other thing I remember is the
20 deeper aquifer underlying the alluvial has a positive
21 hydraulic gradient and so water wells up out of it.
22 That's where we get some of our springs. And so
23 that's eliminated downward migration of any of the
24 selenium. It's limited it to the alluvial aquifer,
25 too, from what I remember.

1 Q. We have drilling that shows in those
2 deeper zones that you're talking about they do not
3 show the contamination --

4 A. Right.

5 Q. -- you're talking about in that alluvial
6 layer.

7 A. And a positive head --

8 Q. Yeah.

9 A. -- higher, so...

10 MS. MORRISON: Thank you. More questions?

11 MR. TOMTEN: What I would propose we do then
12 is move into the hearing. If people think of
13 questions afterwards, we're going to be around after
14 the close of the formal hearing where the transcript
15 is taken.

16 And we'll -- we're happy to answer
17 questions after that, or my phone number and Mike's
18 phone number is on the fact sheet. Feel free to call
19 us whenever you want, and we'll do our best to answer
20 your questions.

21 MS. MORRISON: I think that's great. Just
22 one last time, any more questions before we start the
23 formal part of the hearing?

24 Okay. For the record this hearing is
25 convened on Wednesday, April 11th, 2018 in the Soda

1 Springs' Town Hall. The time is 6:45 p.m. The
2 purpose of this hearing is to listen to your thoughts
3 on EPA's Proposed Plan for the cleanup of the Ballard
4 Mine site.

5 EPA will respond to comments received
6 during the 30-day comment period running from
7 April 2nd, 2018 through May 1st, 2018 in the written
8 response to comments document.

9 All comments received during this period
10 will be considered before a final decision is
11 rendered. During this hearing, we will listen
12 carefully to your comments and we will not respond.
13 Your comments will be recorded and the transcript
14 will be available on the EPA Web site.

15 When you're ready to give your comment,
16 please raise your hand. When I call on you, please
17 stand and say and spell your name so that Lani can
18 transcribe it and then state your comment.

19 When you're done speaking and you sit
20 down, I'll call on the next speaker. Who would like
21 to give a comment? We can wait. Let's give it a
22 couple more minutes just in case somebody comes up
23 with something. And remember that all comments are
24 considered equally so if you do want to give a
25 comment and you don't want to say it out loud, that's

1 fine. You can certainly send it and we will value it
2 and appreciate it.

3 Okay. Seeing that no one else wishes to
4 give comment, I formally close this hearing for the
5 Ballard Mine Proposed Plan at 7:50 p.m. Thank you
6 all so much for your time, and your contributions.

7 If anyone -- 6:50, sorry. We did not
8 spend an hour and ten minutes sitting and waiting.
9 And, you know, since we're all still here, if you
10 want to ask more questions, you know, I think this is
11 still a good time to do it. So please don't hesitate
12 to ask more questions and we've still got Dave and
13 all the crew.

14 Okay. Thanks, folks. Please feel free
15 to mill around and you can ask questions individually
16 and thanks again, I really appreciate you coming.

17 (The hearing concluded at 6:50 p.m.)
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1 REPORTER'S CERTIFICATE

2
3 STATE OF IDAHO)
4 COUNTY OF BONNEVILLE) ss.
5
6

7 I, Lanice M. Lewis, Court Reporter and Notary
8 Public in and for the State of Idaho, do hereby
9 certify:

10 That said hearing was taken down by me in
11 shorthand at the time and place therein named and
12 thereafter reduced to typewriting under my direction,
13 and that the foregoing transcript contains a full,
14 true, and verbatim record of said hearing.

15 I further certify that I have no interest in the
16 event of the action.

17 WITNESS my hand and seal this 16th day of April
18 2018.
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25

Lanice M. Lewis
Notary Public in and for
the State of Idaho.

My Commission Expires: 11-10-18

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